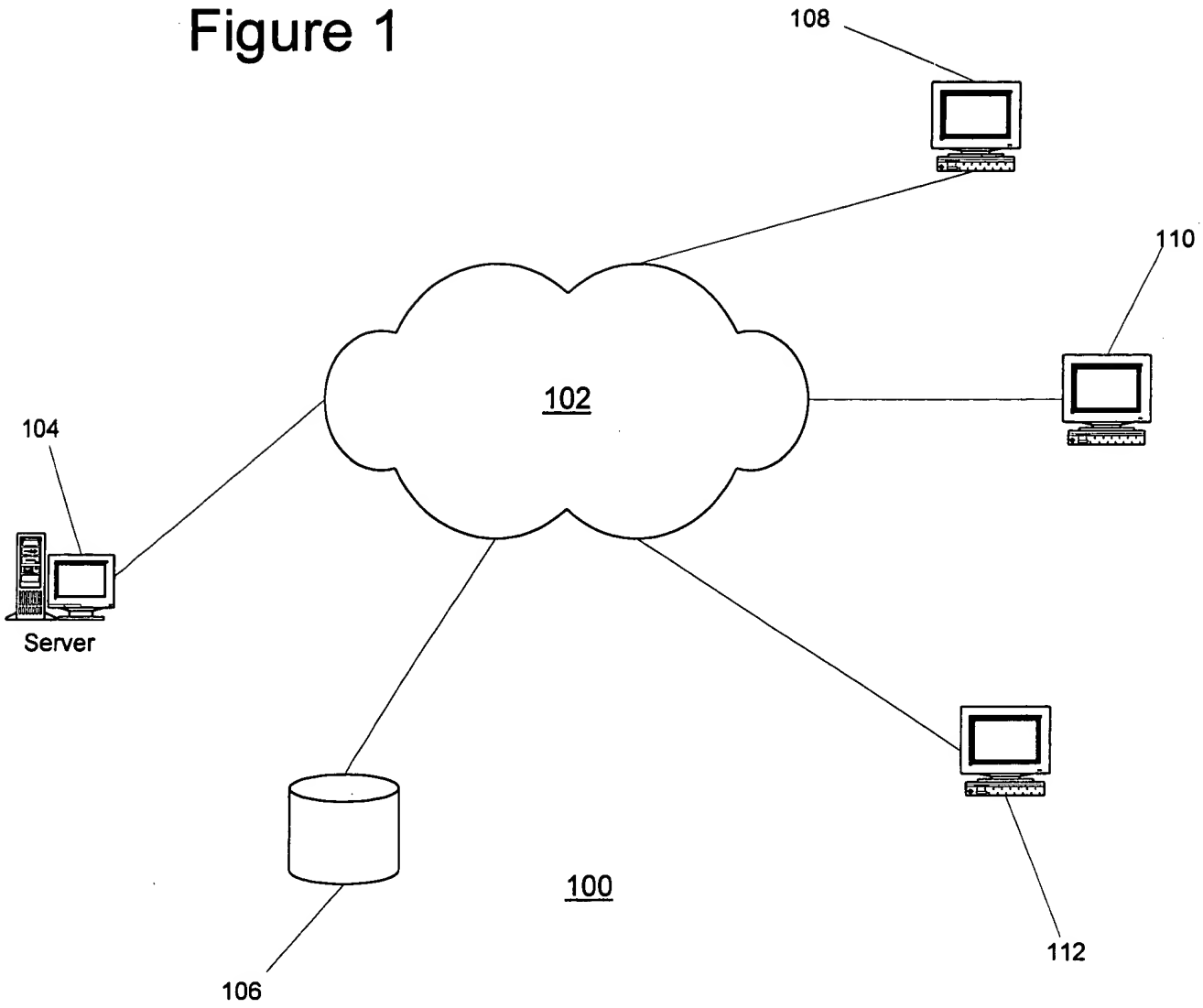
Figure 1



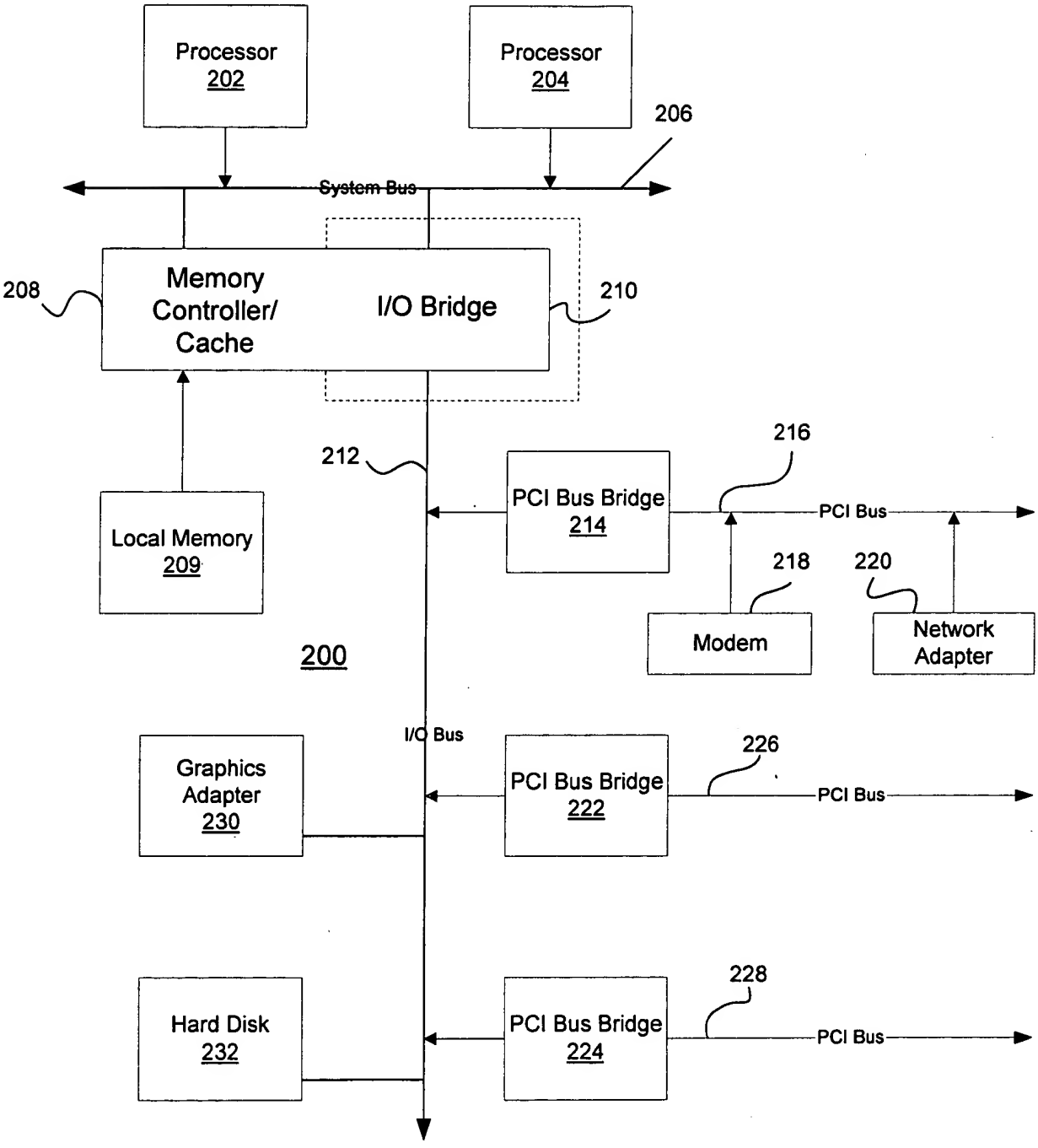

Processor
202
Processor
204
206
System Bus
208
Memory
Controller/
Cache
I/O Bridge
210
212
216
Local Memory
209
PCI Bus Bridge
214
PCI Bus
218
220
Modem
Network
Adapter
200
I/O Bus
Graphics
Adapter
230
PCI Bus Bridge
222
226
PCI Bus
Hard Disk
232
PCI Bus Bridge
224
228
PCI Bus

Figure 2

B60E20" EB992T60

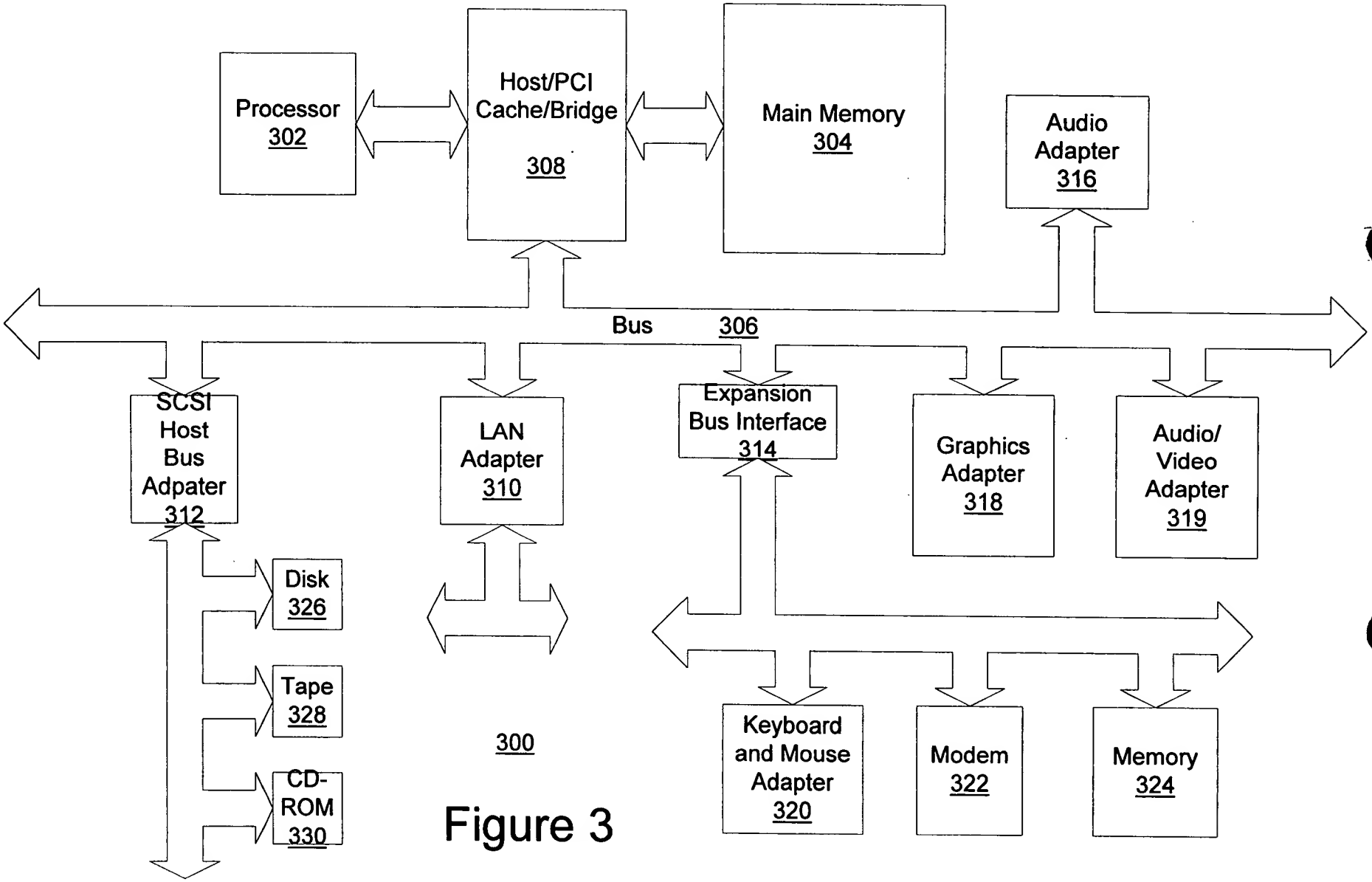


Figure 3

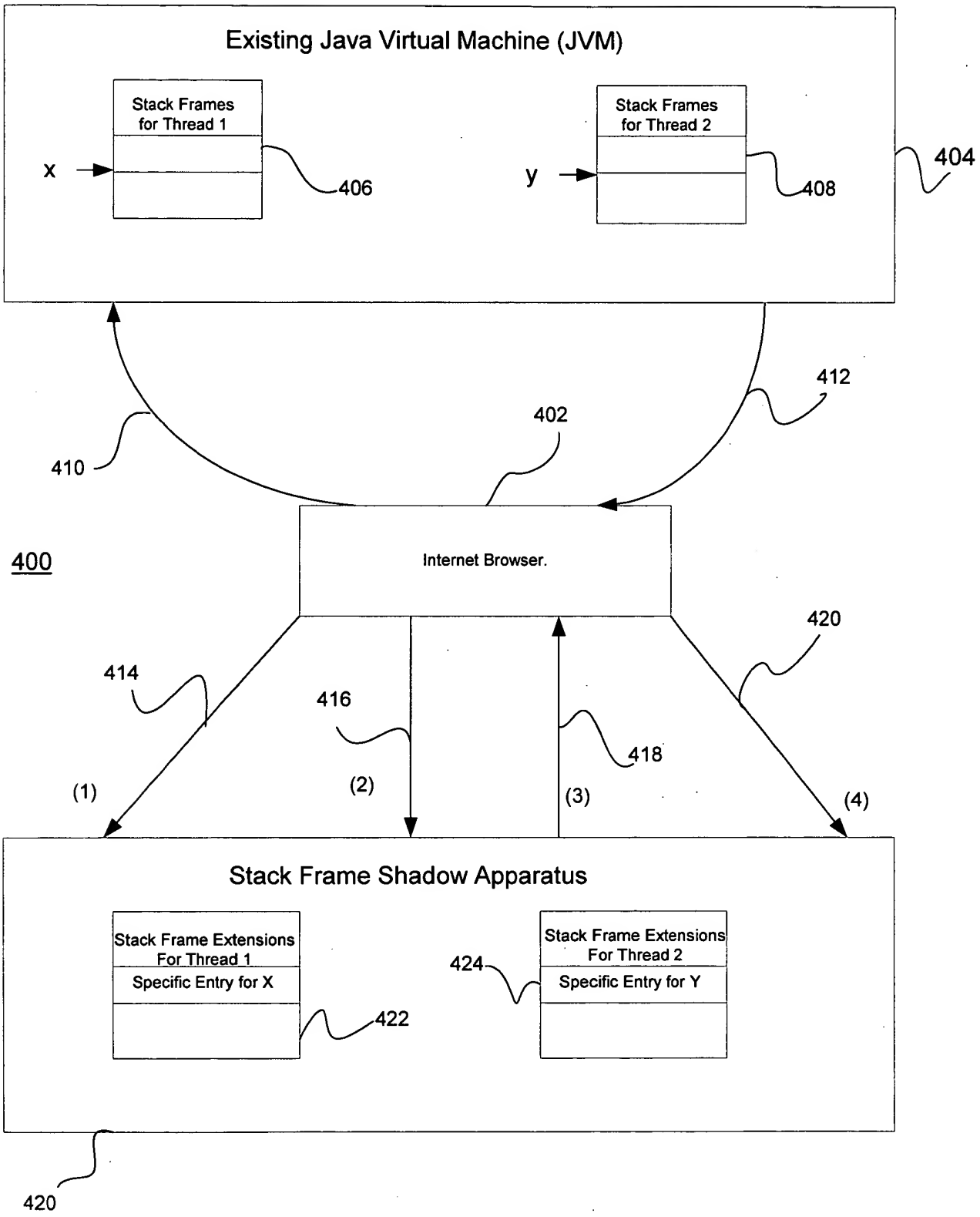

Existing Java Virtual Machine (JVM)
Stack Frames for Thread 1
x
406
Stack Frames for Thread 2
y
408
404
412
410
402
400
Internet Browser.
420
414
416
418
(1)
(2)
(3)
(4)
Stack Frame Shadow Apparatus
Stack Frame Extensions For Thread 1
Specific Entry for X
422
424
Stack Frame Extensions For Thread 2
Specific Entry for Y
420

Figure 4

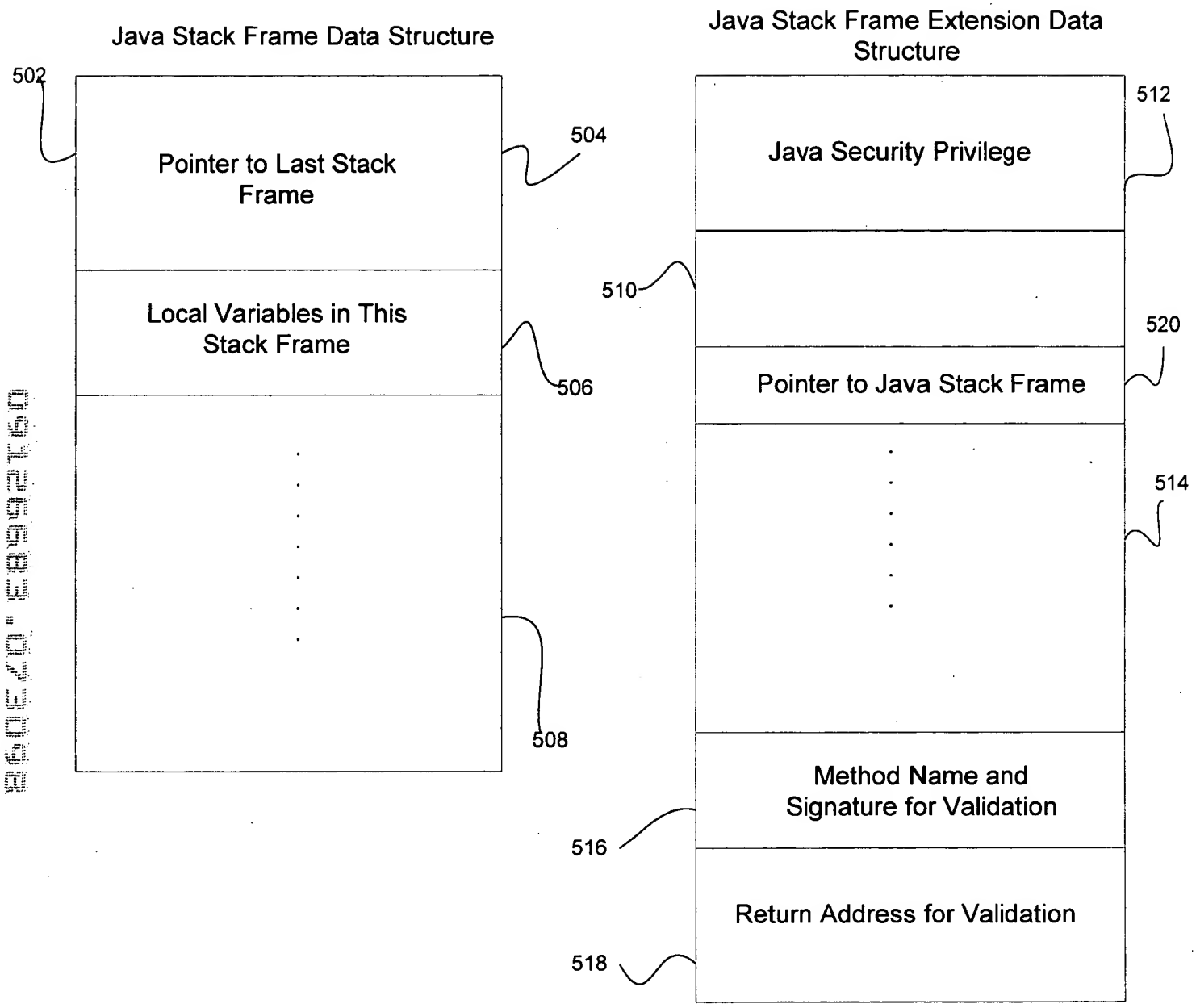

Java Stack Frame Data Structure
502
Pointer to Last Stack Frame
504
Local Variables in This Stack Frame
506
508
Java Stack Frame Extension Data Structure
512
Java Security Privilege
510
520
Pointer to Java Stack Frame
514
Method Name and Signature for Validation
516
Return Address for Validation
518

Figure 5

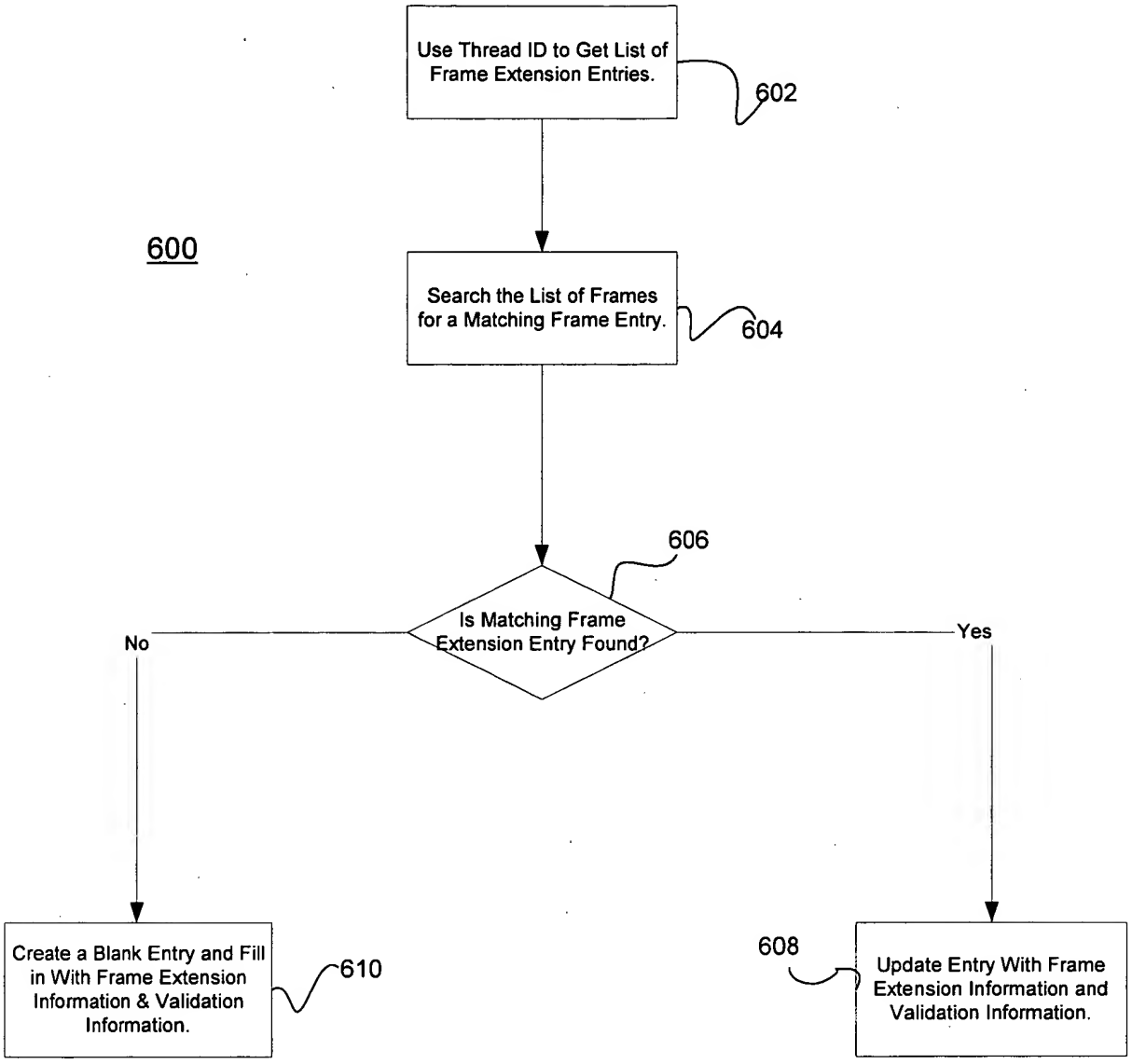

600
Use Thread ID to Get List of Frame Extension Entries.
602
Search the List of Frames for a Matching Frame Entry.
604
606
Is Matching Frame Extension Entry Found?
No
Yes
Create a Blank Entry and Fill in With Frame Extension Information & Validation Information.
610
608
Update Entry With Frame Extension Information and Validation Information.

Figure 6

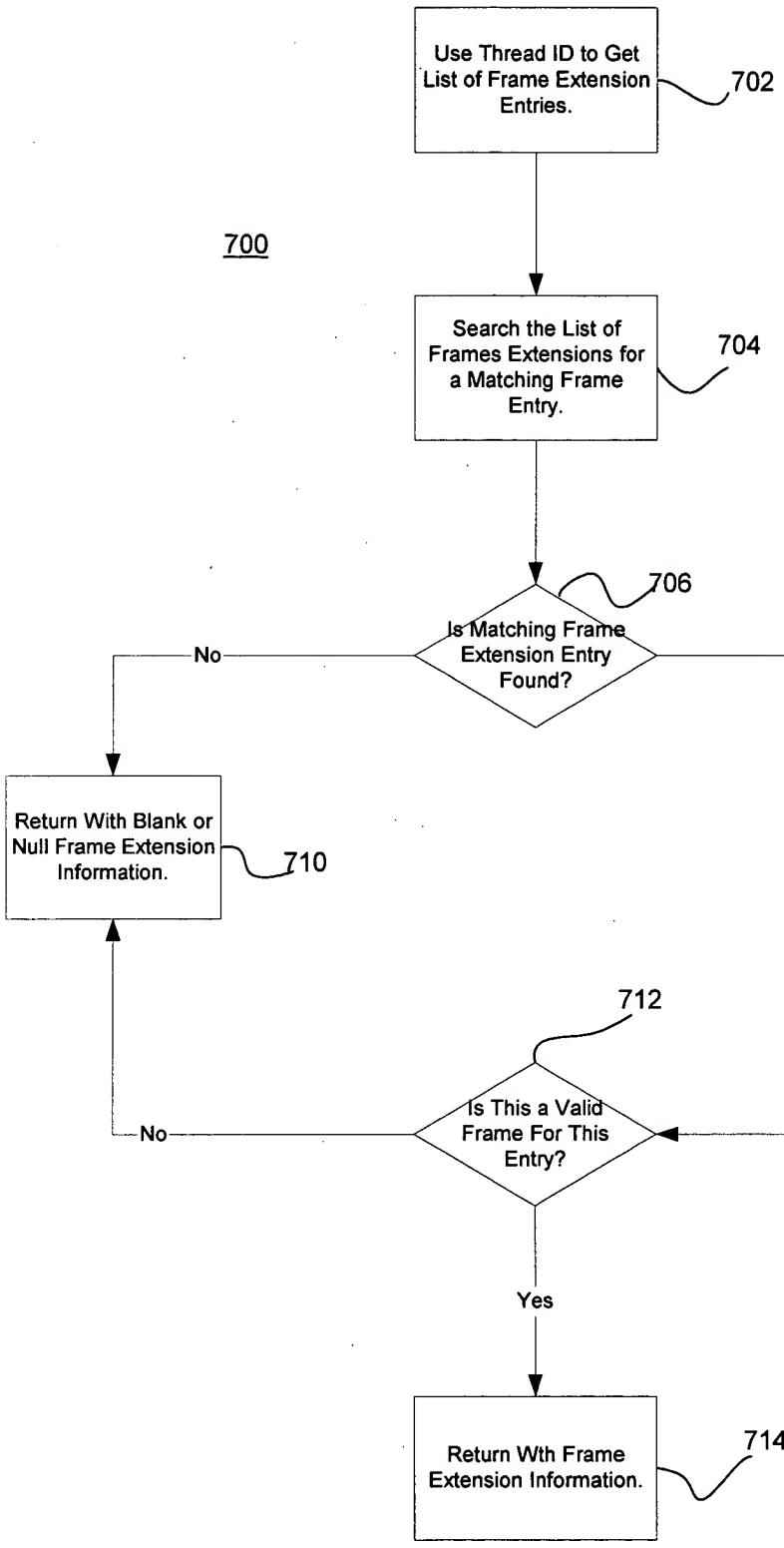


Figure 7

Docket No. 200503

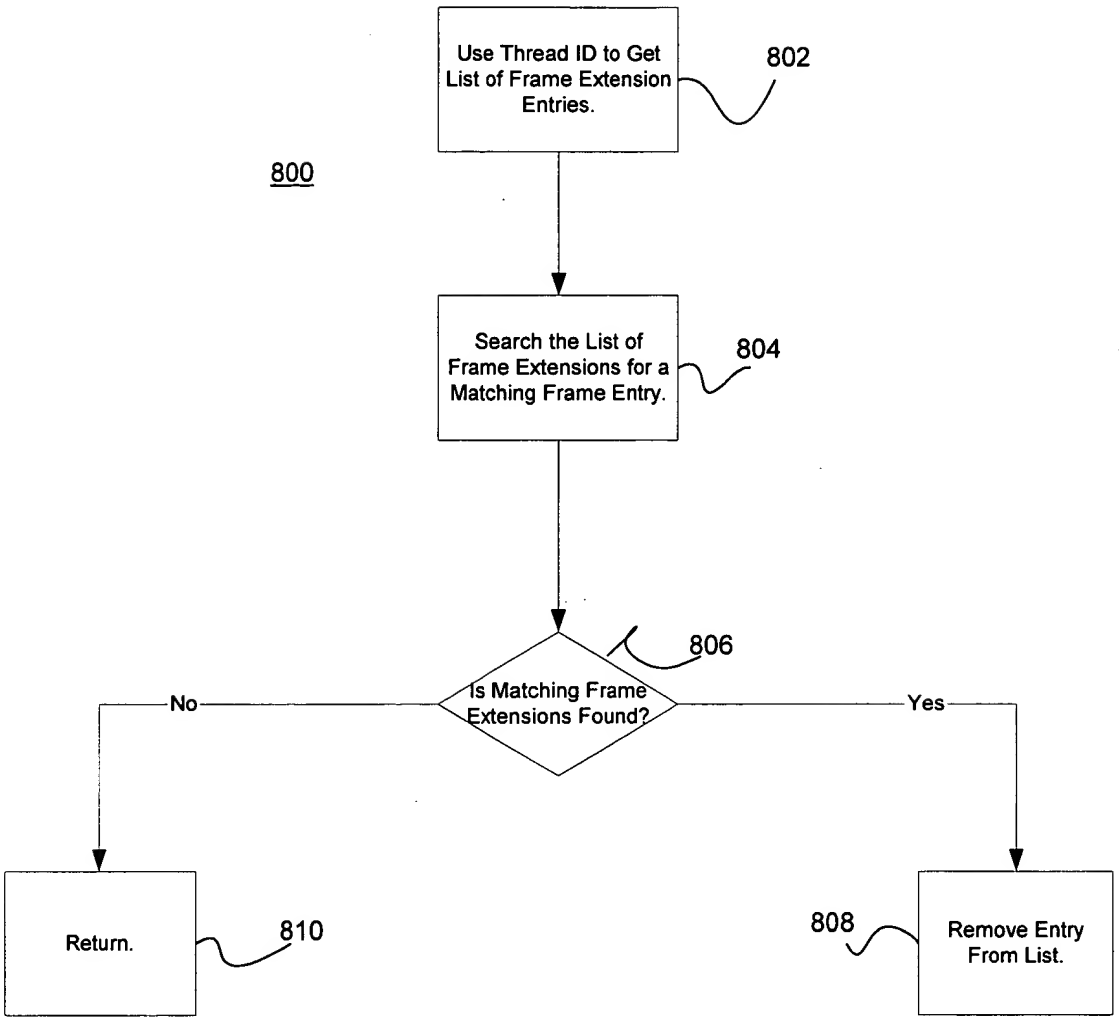

800
Use Thread ID to Get List of Frame Extension Entries.
802
Search the List of Frame Extensions for a Matching Frame Entry.
804
Is Matching Frame Extensions Found?
806
No
Yes
Return.
810
Remove Entry From List.
808

Figure 8